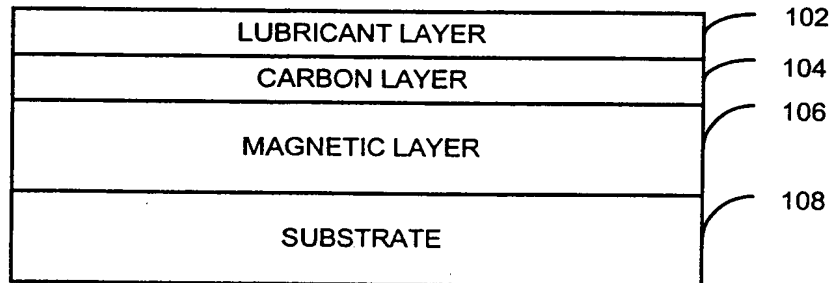




Title: System For Simultaneously Measuring Thin
Film Layer Thickness, Reflectivity, Roughness,
Surface Profile And Magnetic Pattern
Inventor(s): Steven W. Meeks *et al.*
Atty. Docket No.: 20830-04304
Sheet 1 of 25



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FIGURE 1



Title: System For Simultaneously Measuring Thin Film Layer Thickness, Reflectivity, Roughness, Surface Profile And Magnetic Pattern
Inventor(s): Steven W. Meeks *et al.*
Atty. Docket No.: 20830-04304
Sheet 2 of 25

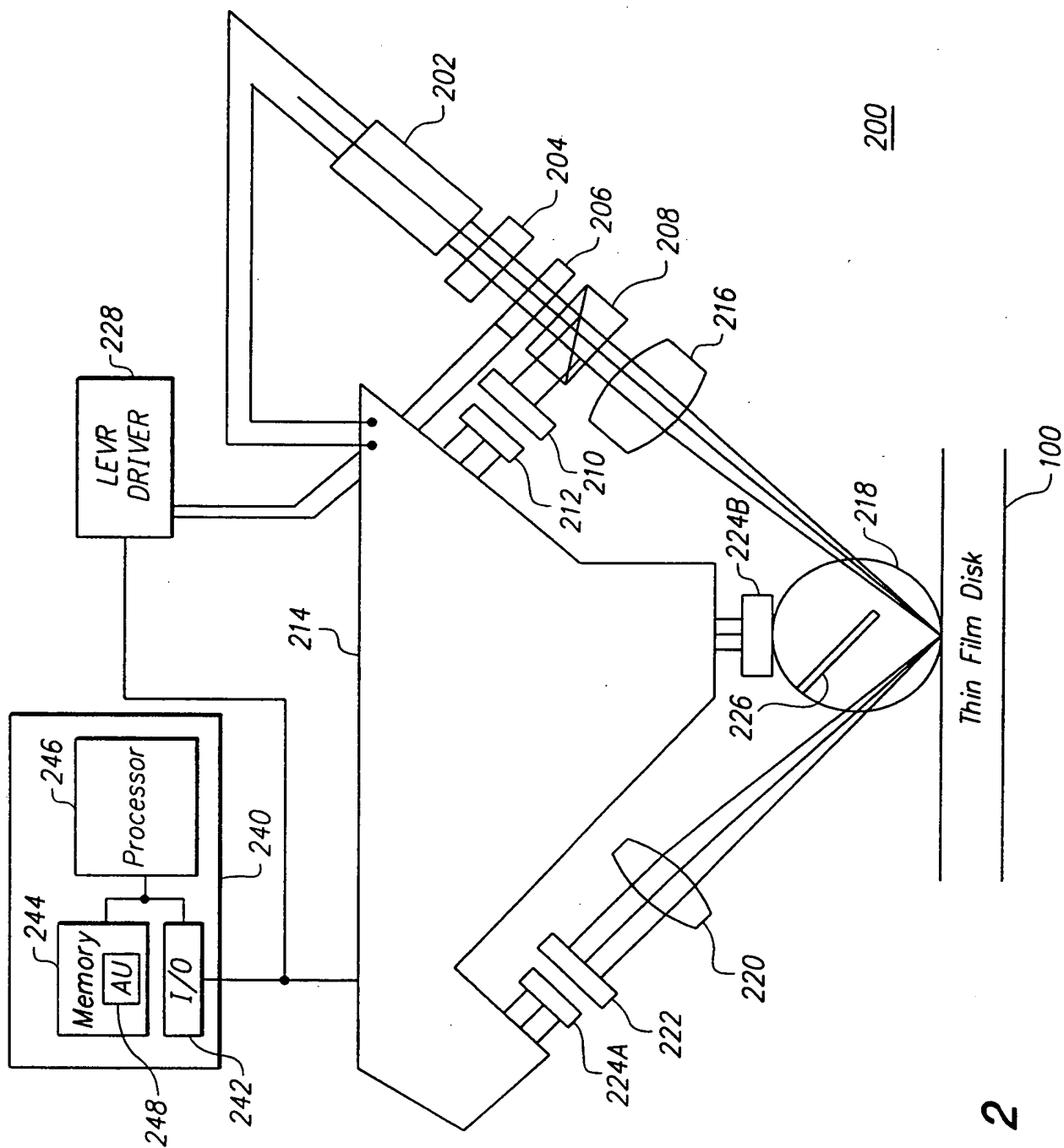


FIG. 2

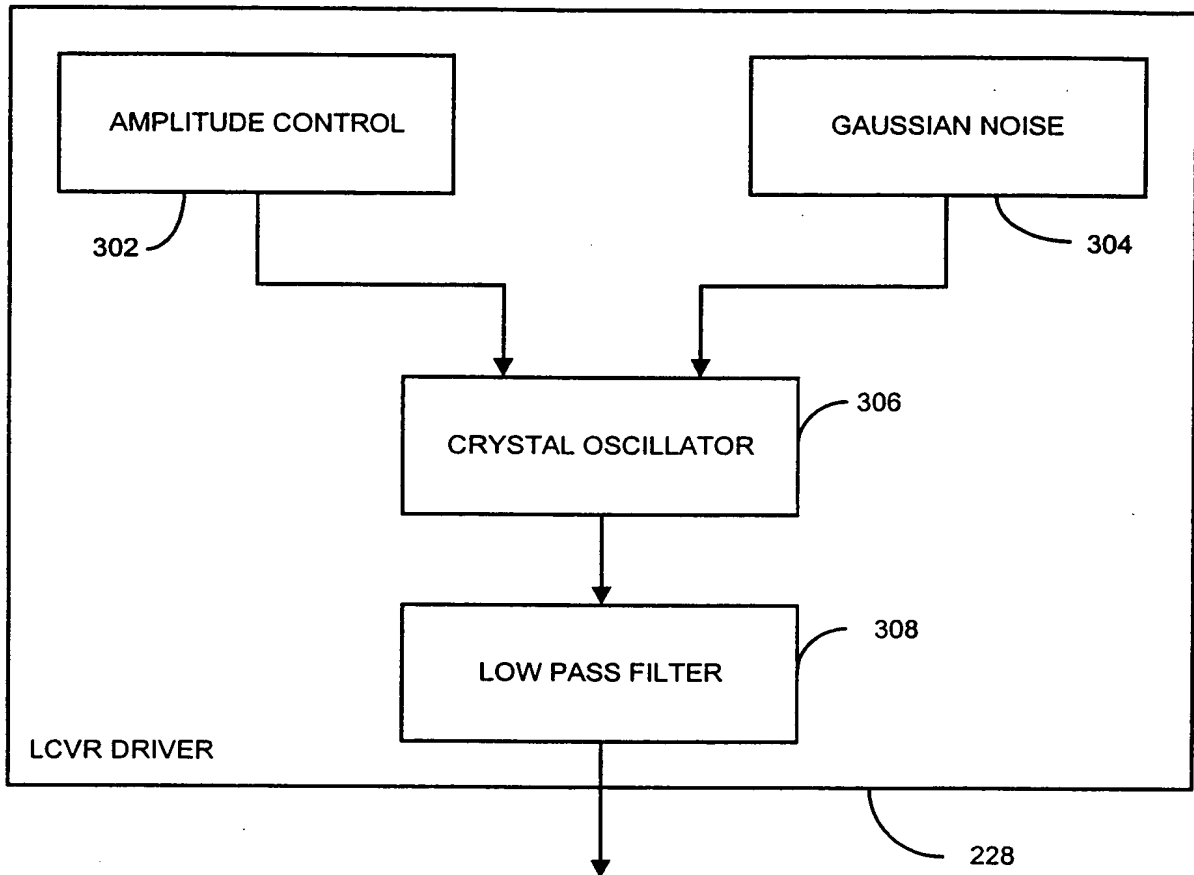
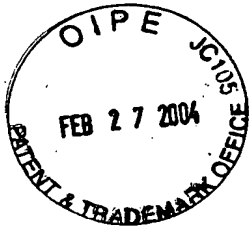


FIGURE 3



Title: System For Simultaneously Measuring Thin
Film Layer Thickness, Reflectivity, Roughness,
Surface Profile And Magnetic Pattern
Inventor(s): Steven W. Meeks *et al.*
Atty. Docket No.: 20830-04304
Sheet 4 of 25

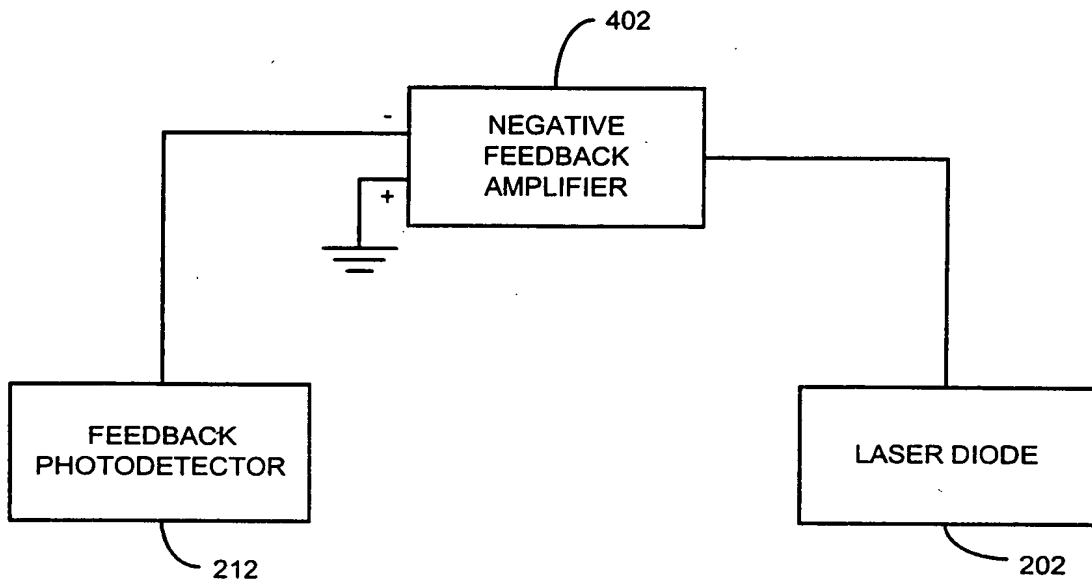
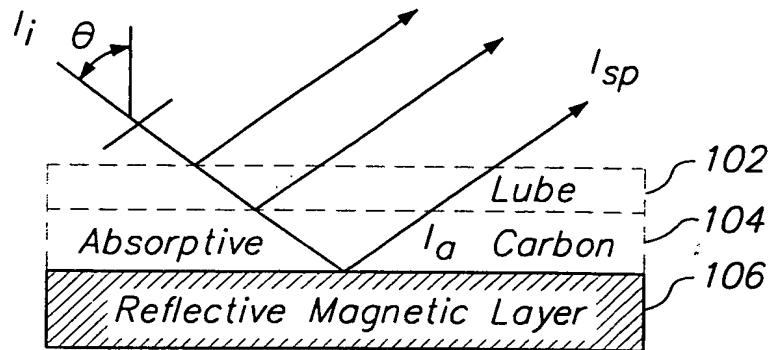


FIGURE 4



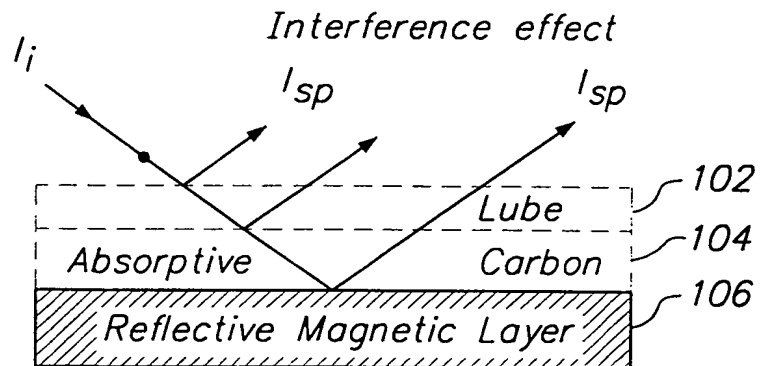
*P Polarized
Specular Light*

FIG. 5A



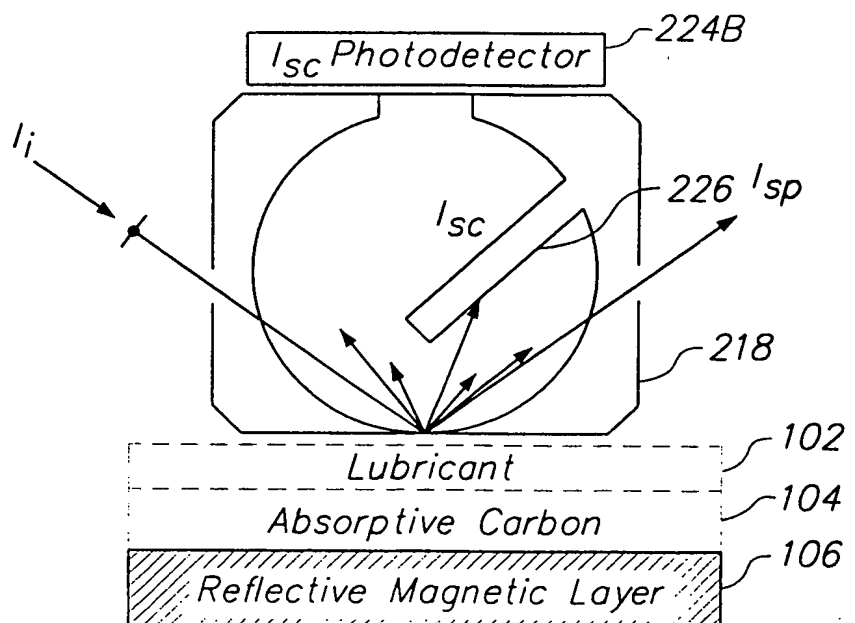
*S Polarized
Specular Light*

FIG. 5B



*P or S Polarized
Scattered Light*

FIG. 5C



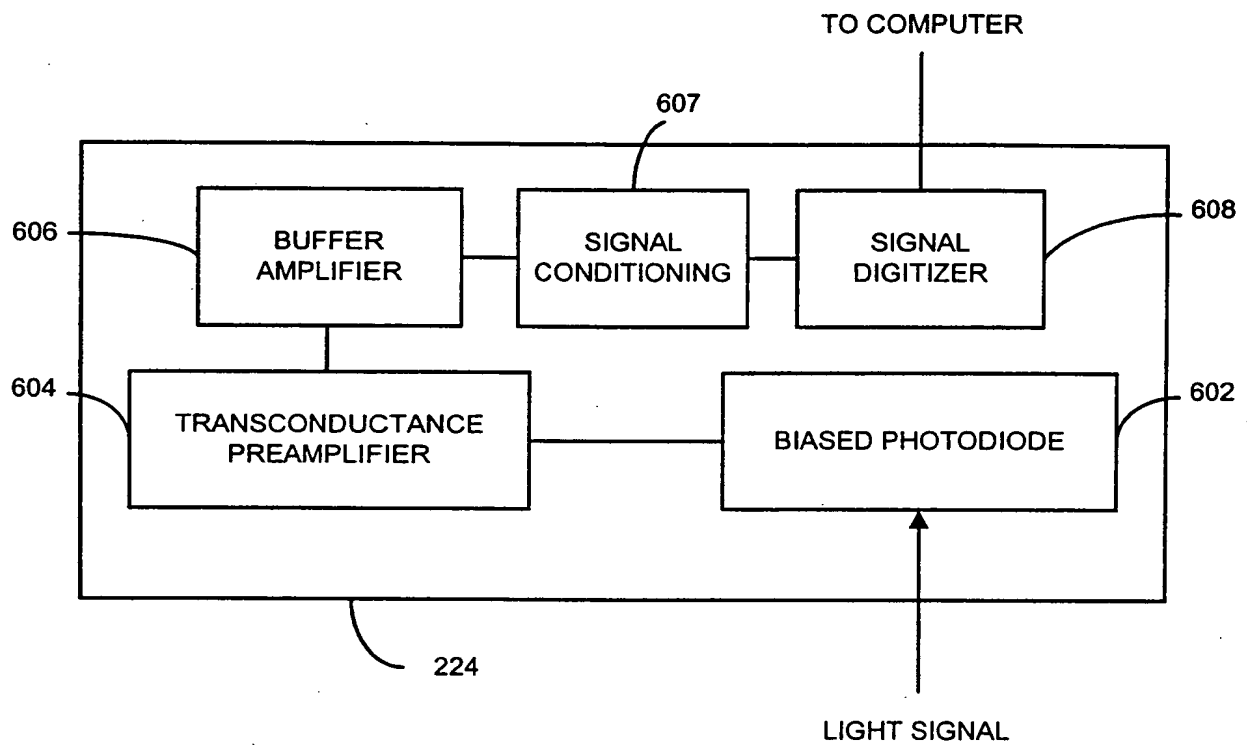


FIGURE 6

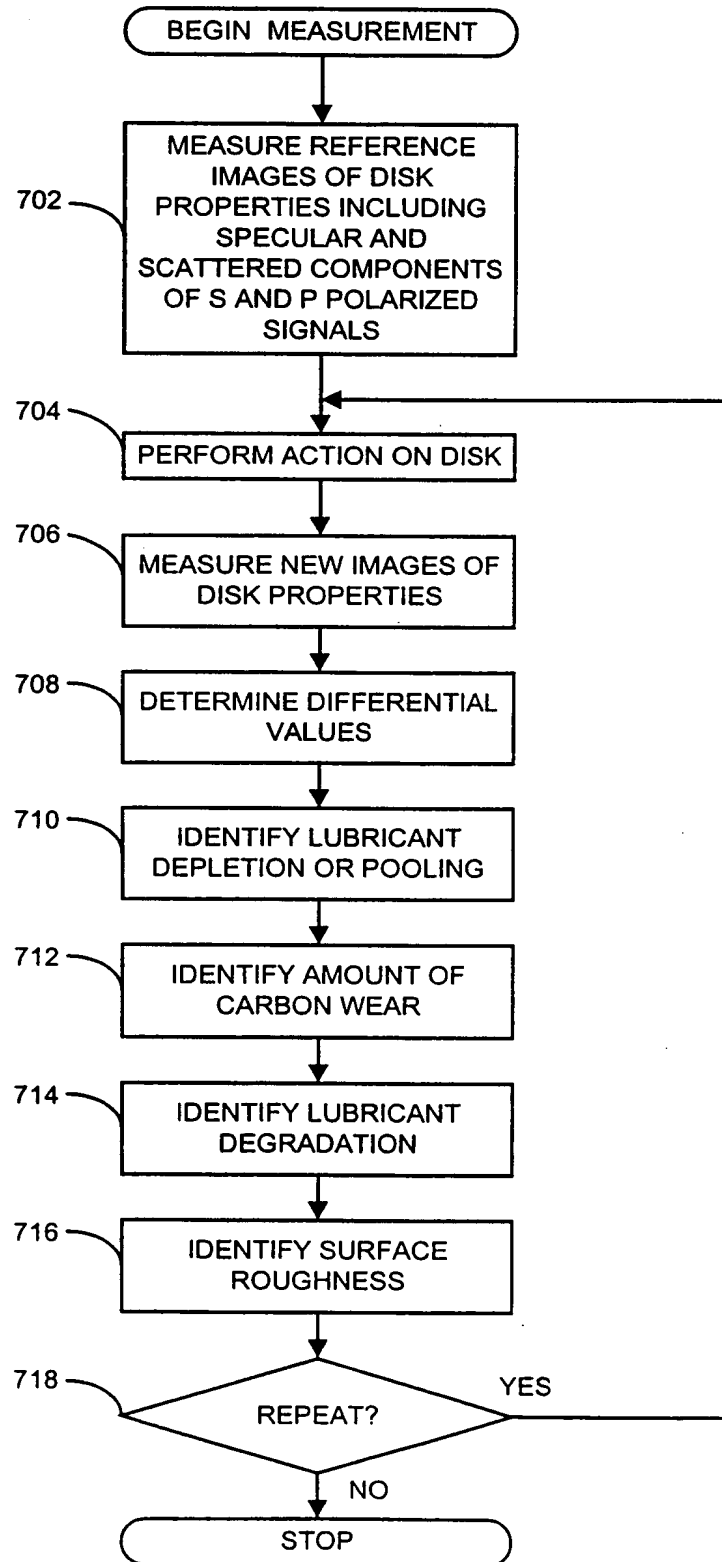


FIGURE 7

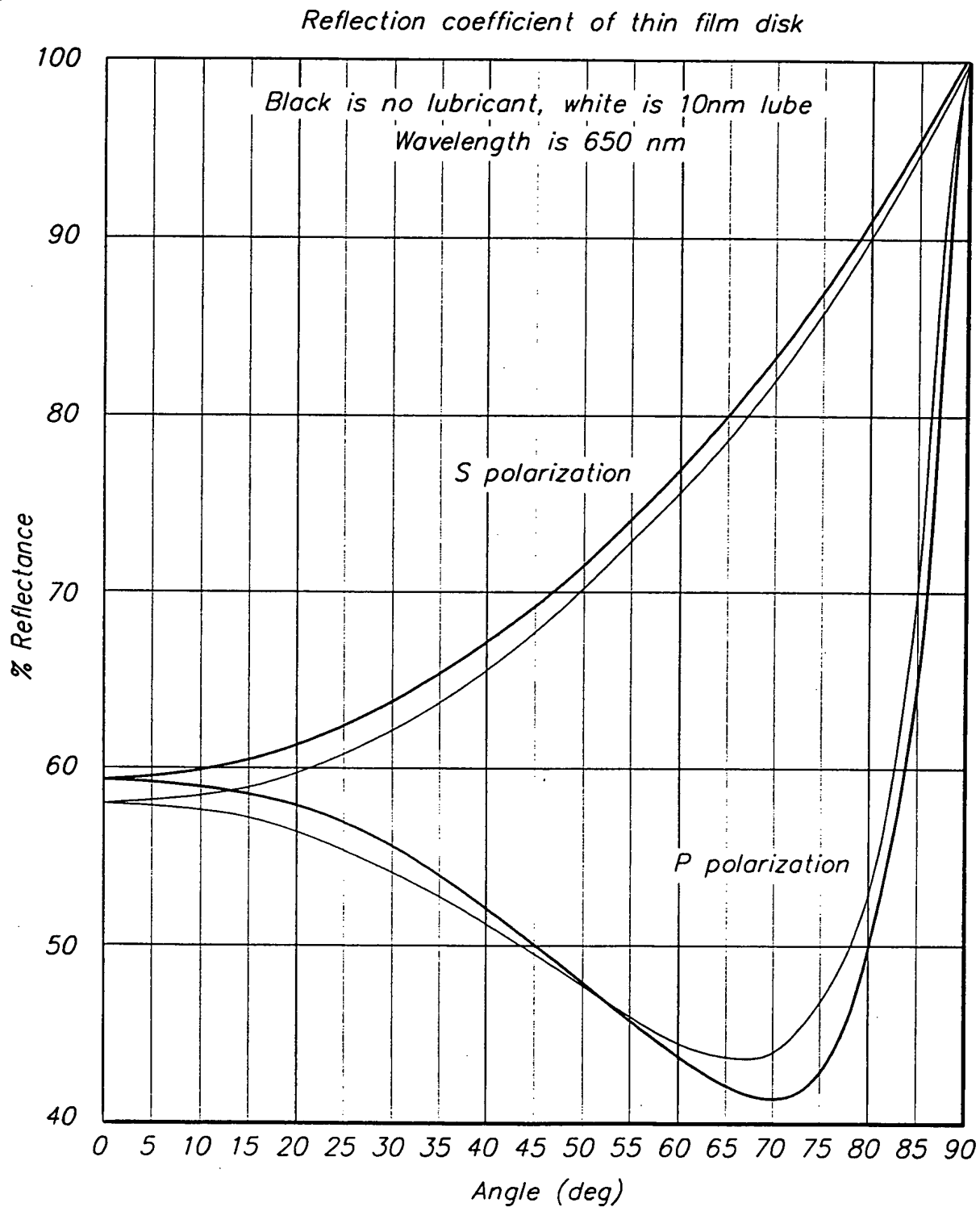
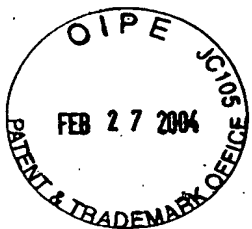


FIG. 8

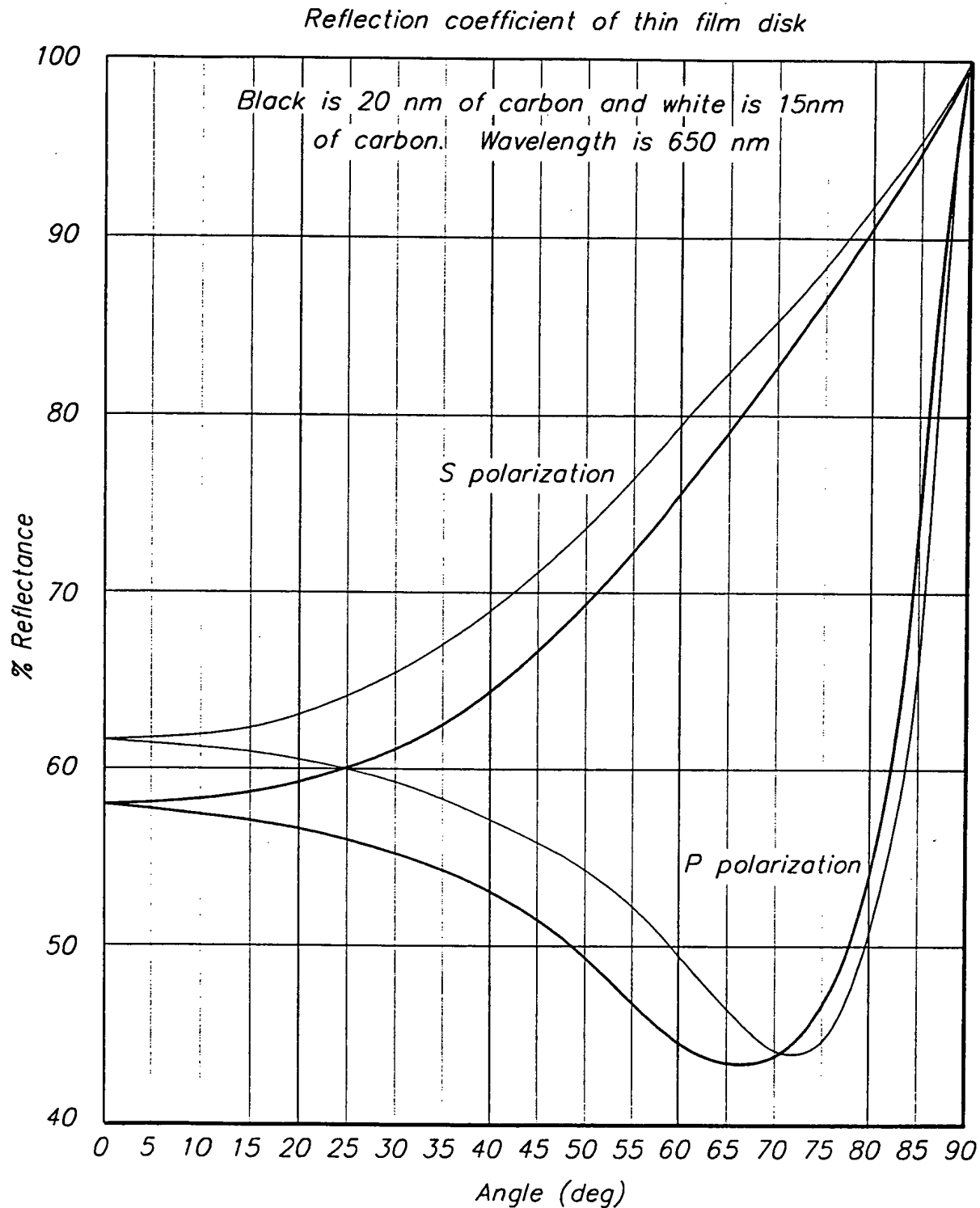


FIG. 9

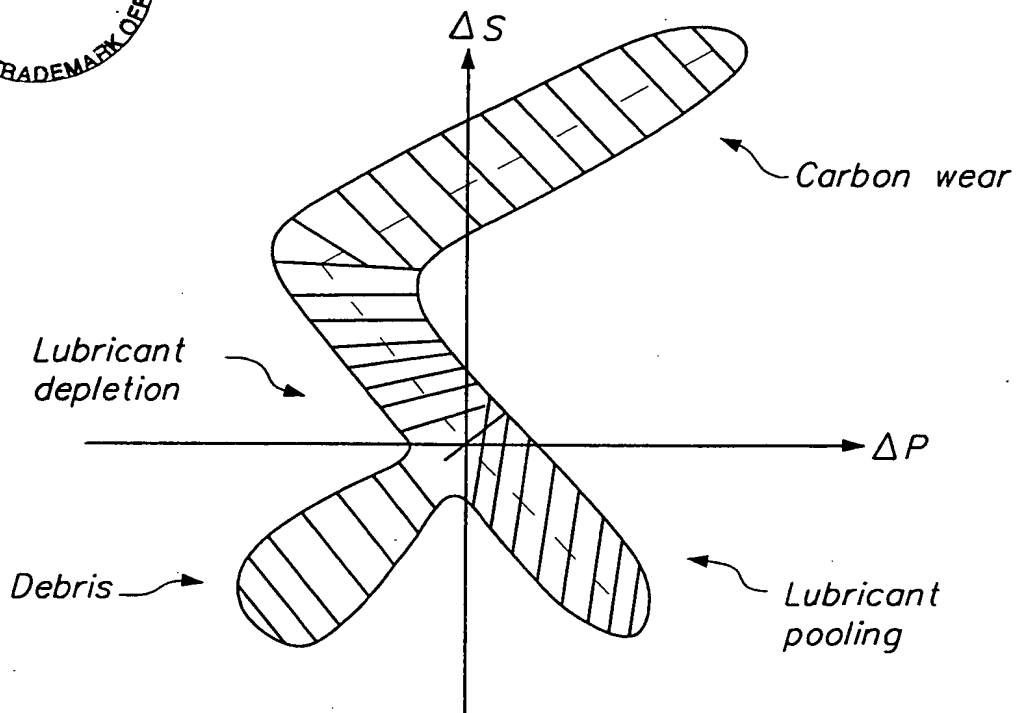
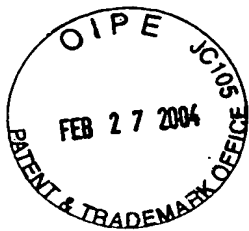


FIG. 10

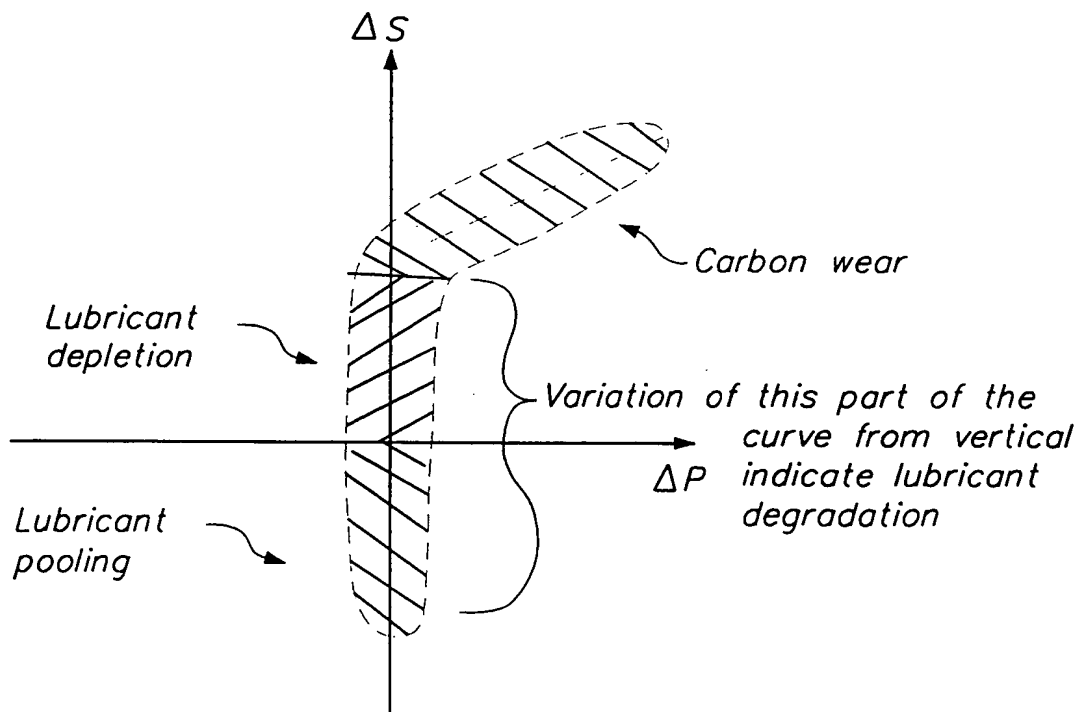
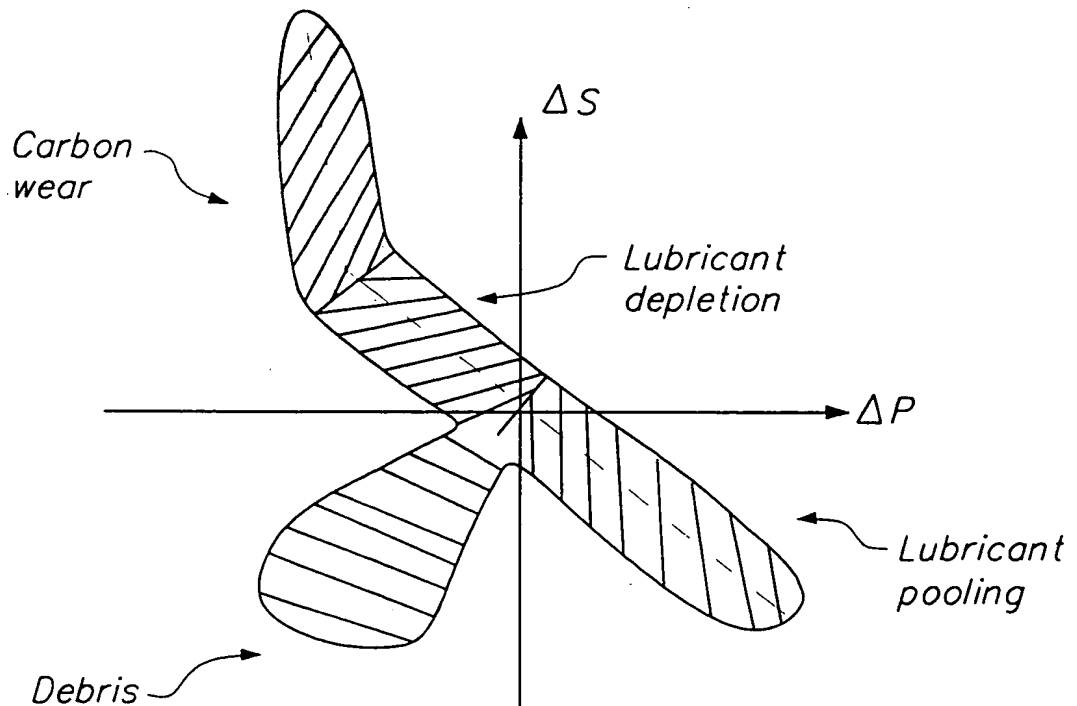
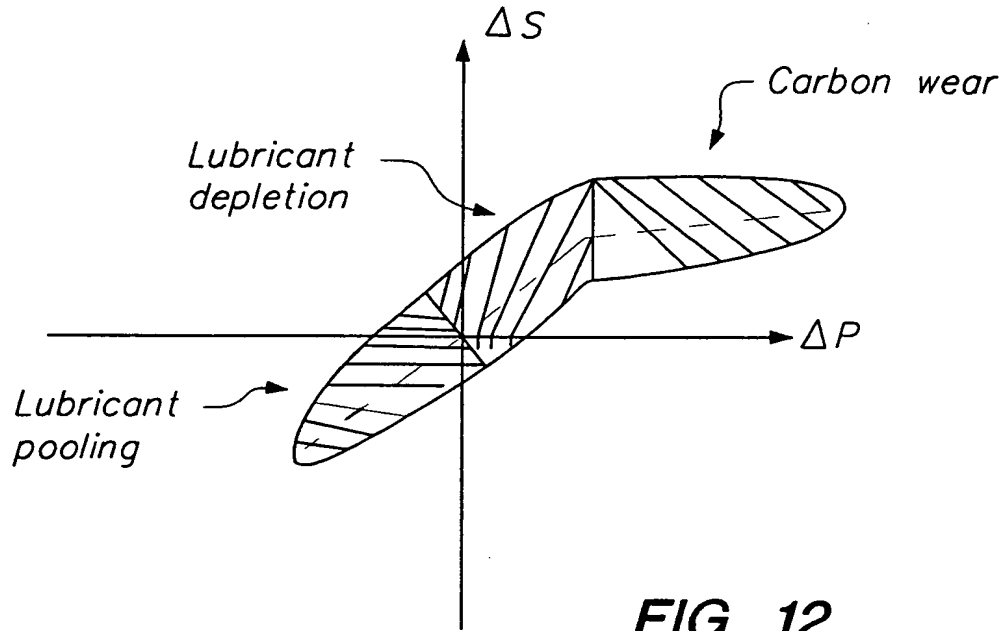
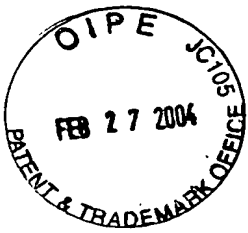


FIG. 11



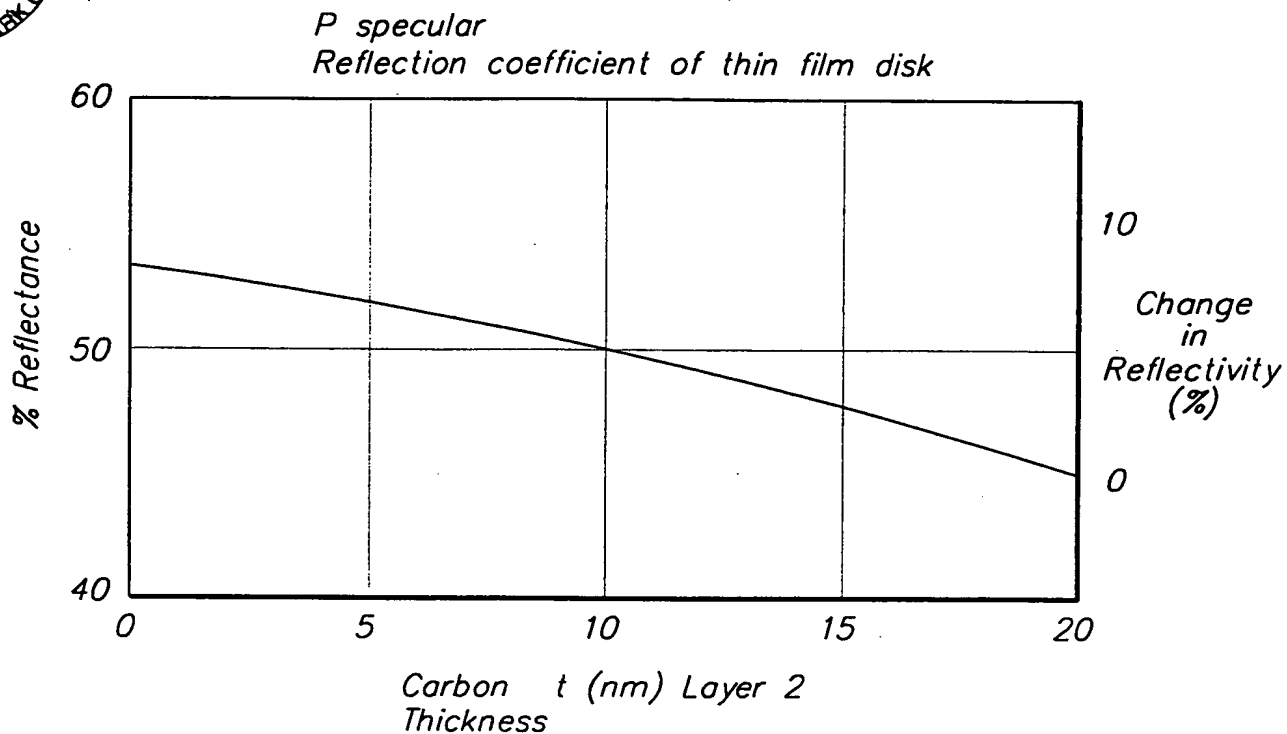


FIG. 14

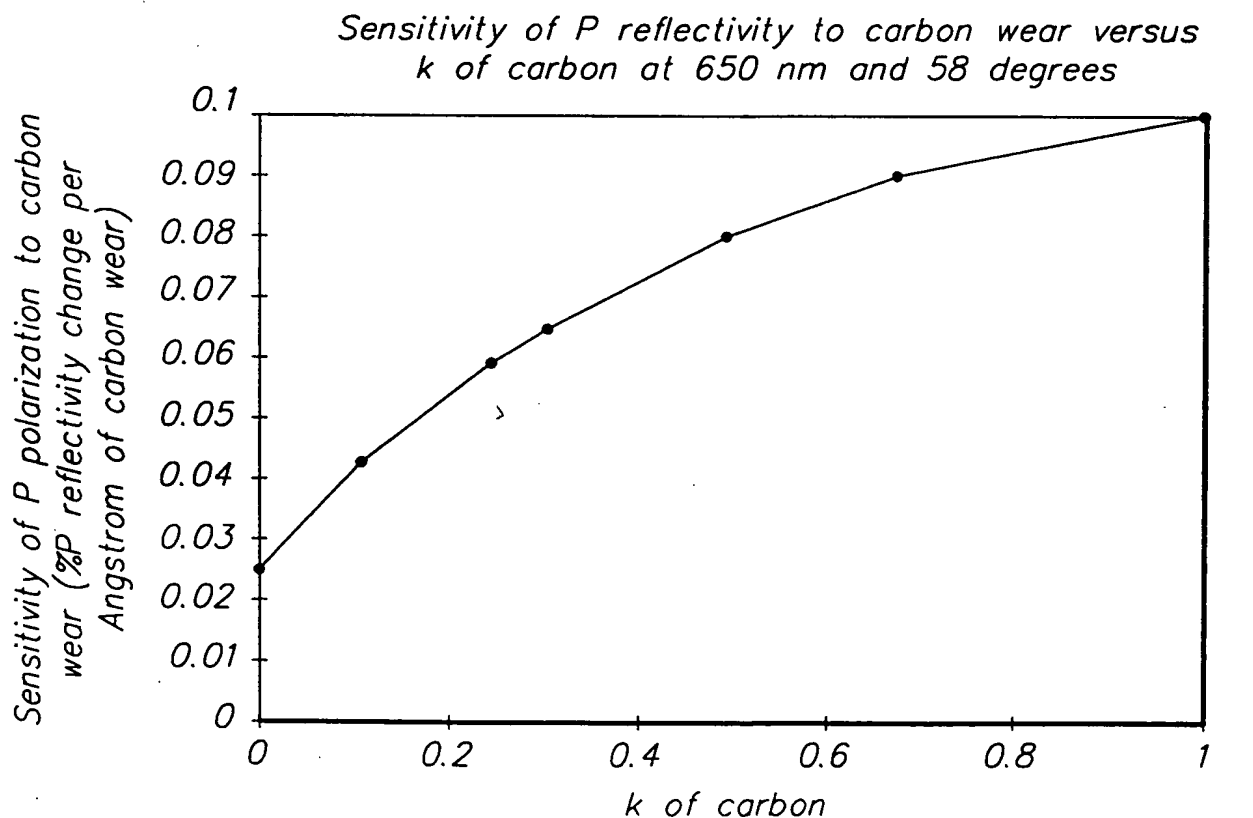


FIG. 15

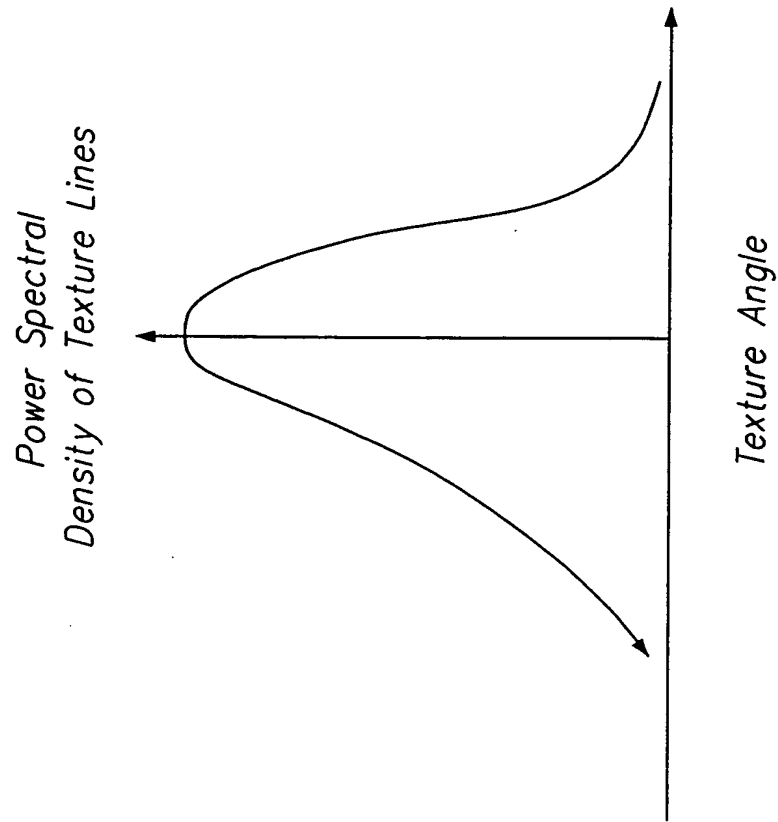


FIG. 17

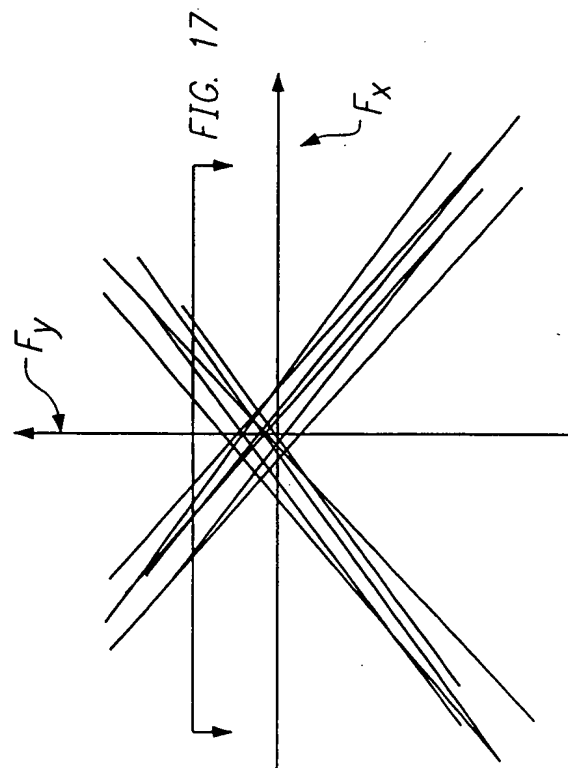


FIG. 16

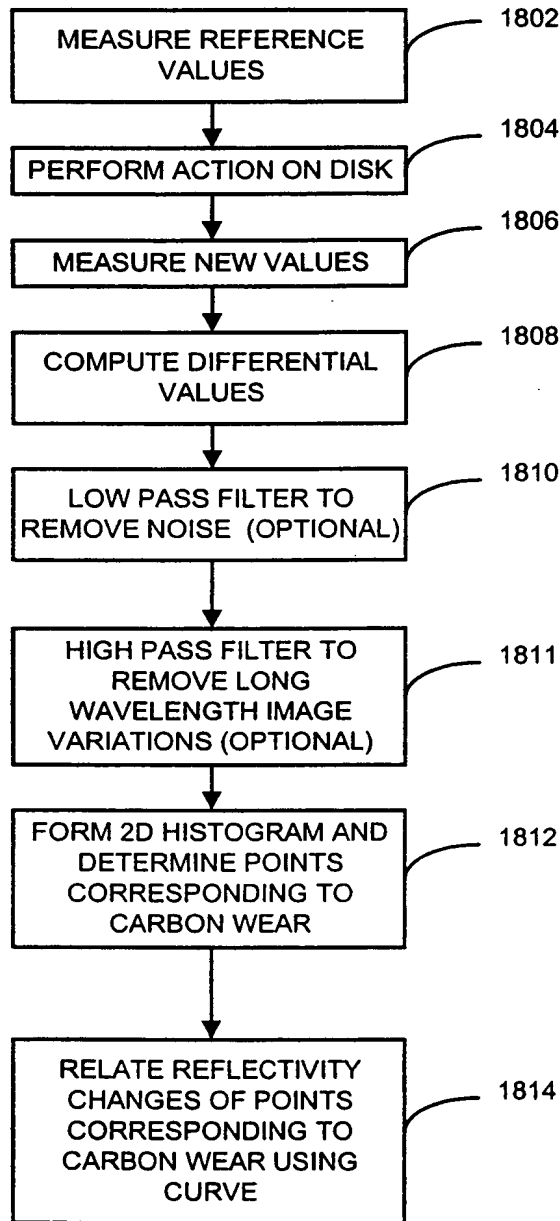


FIGURE 18

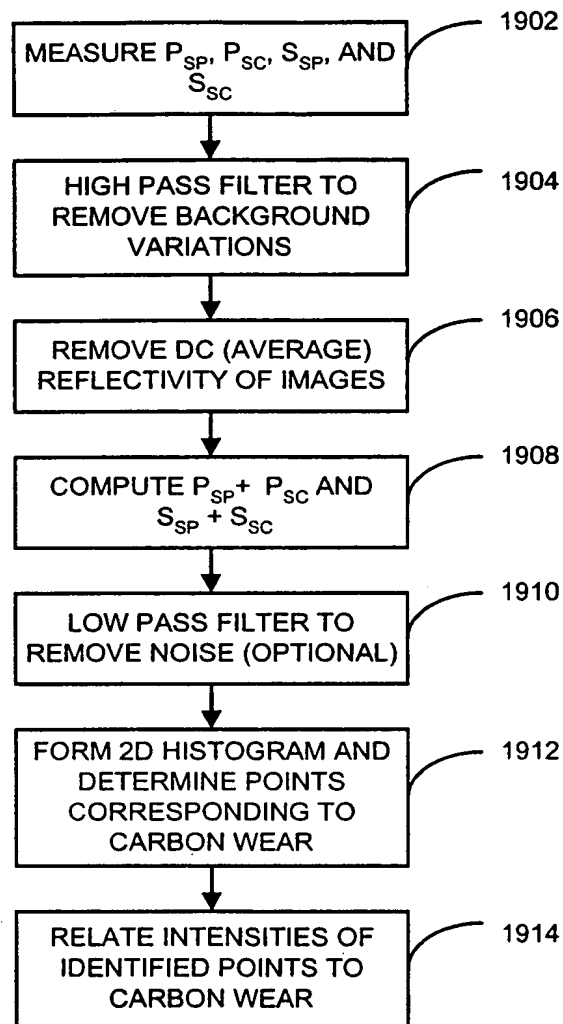


FIGURE 19

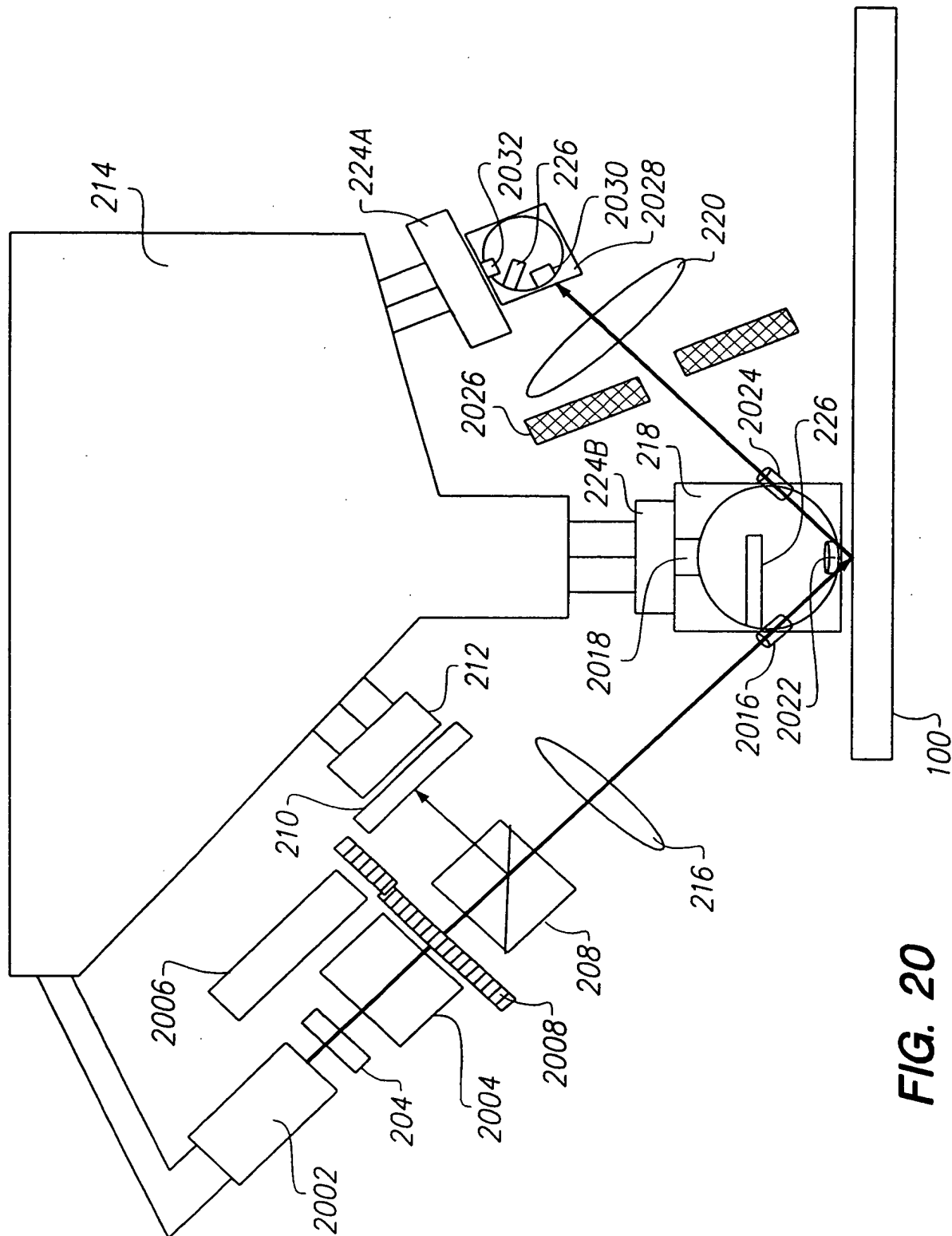


FIG. 20

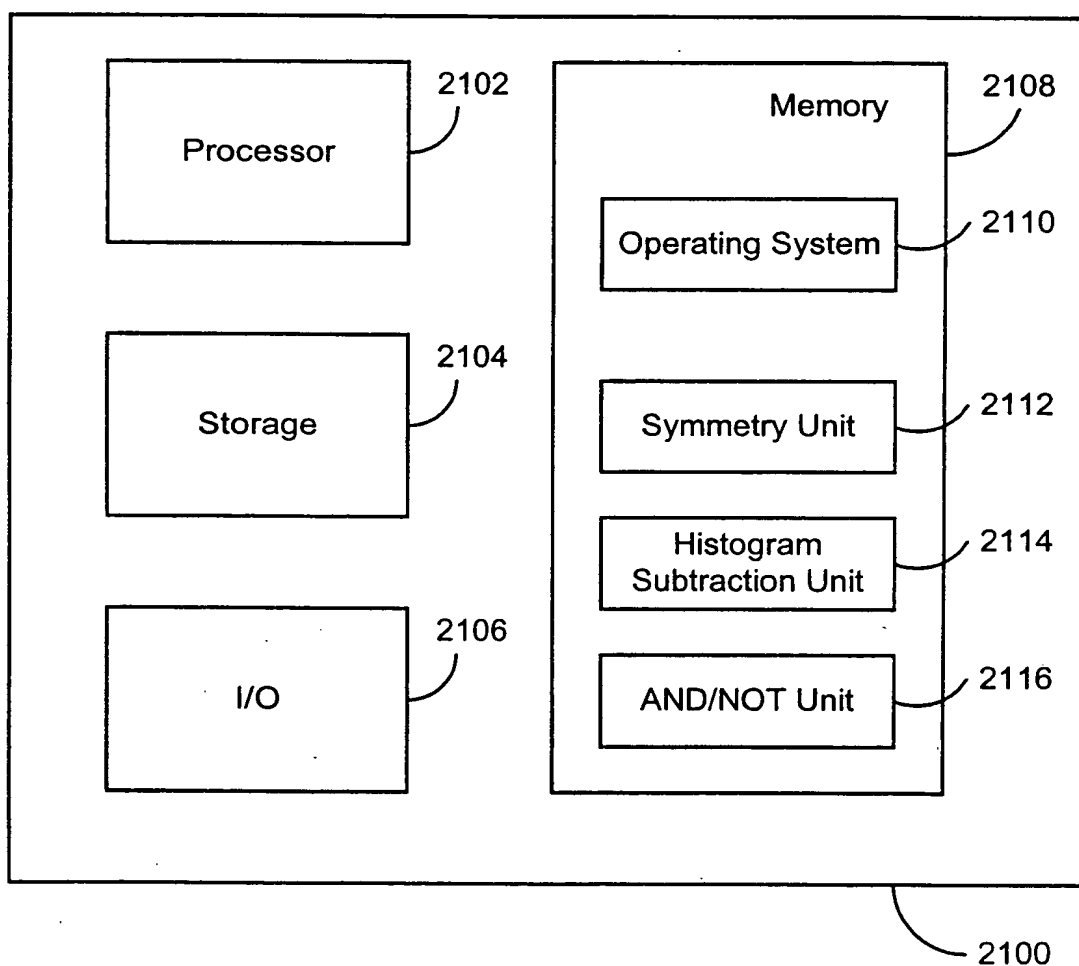


Figure 21

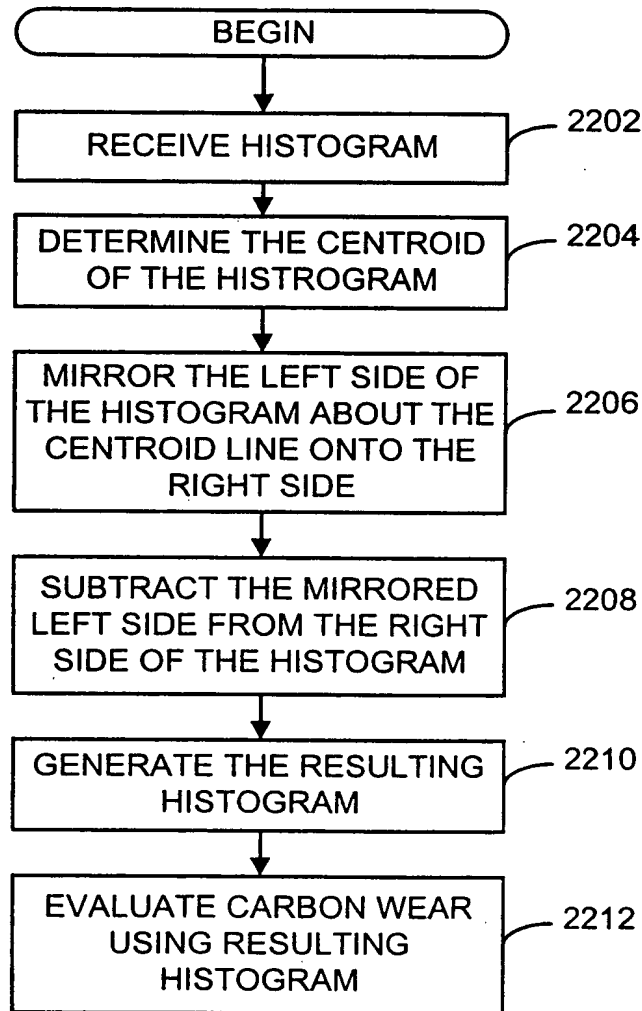


Figure 22

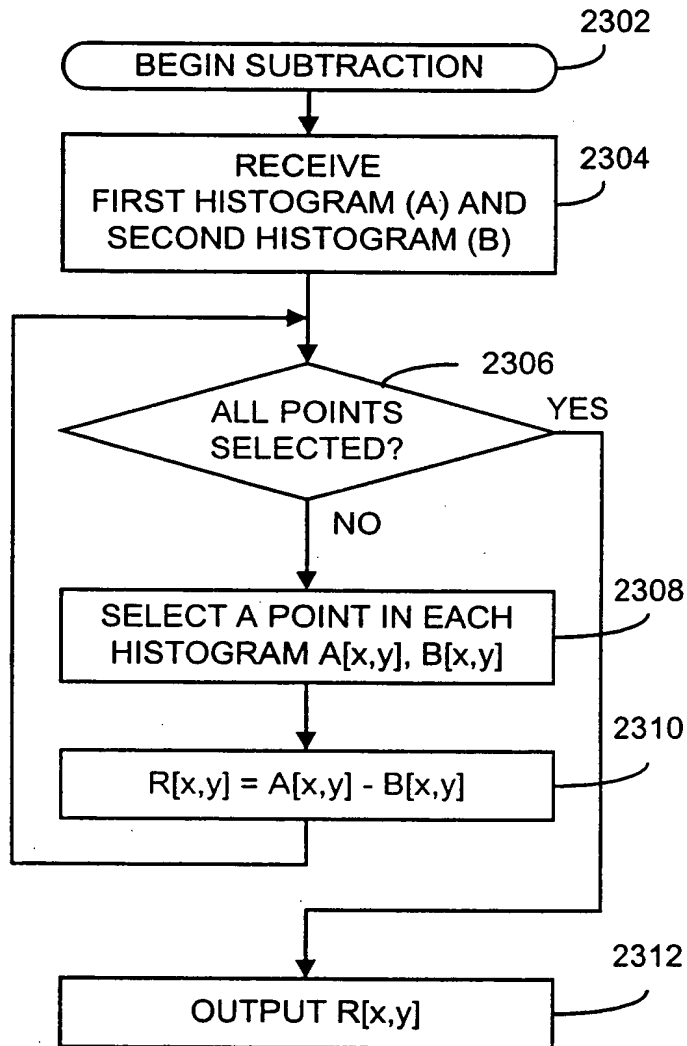


Figure 23

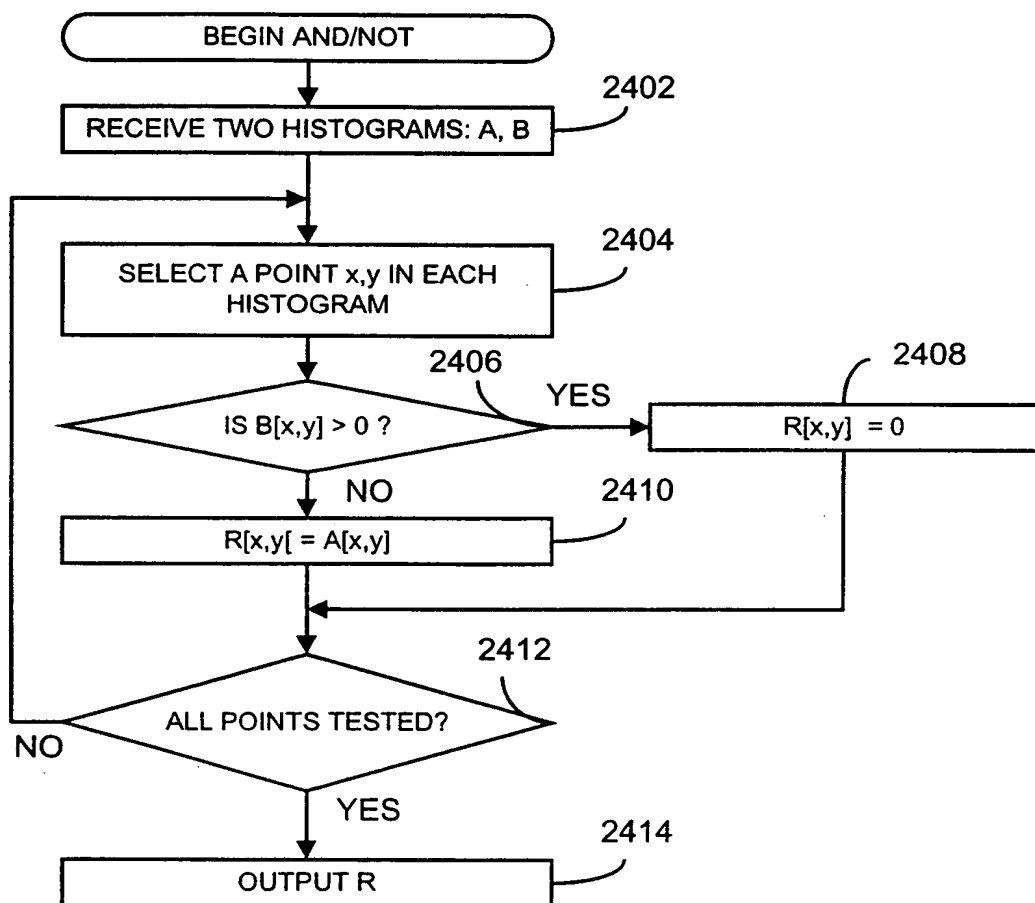


Figure 24

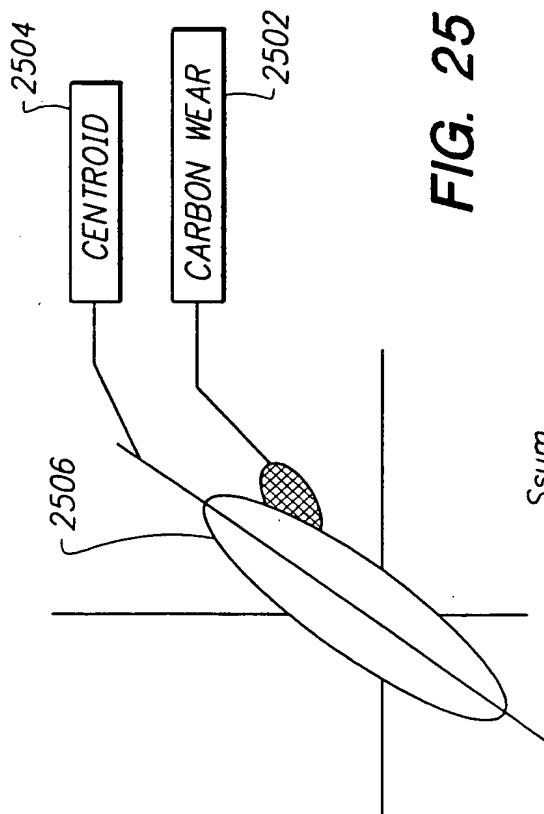
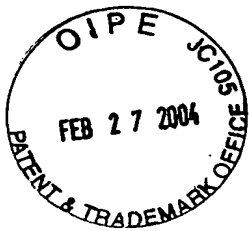


FIG. 25

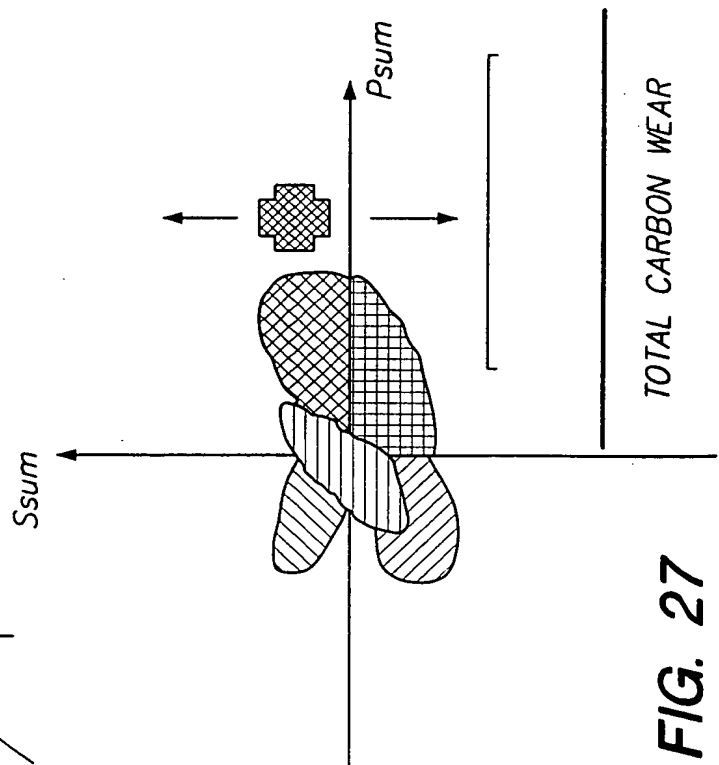


FIG. 27

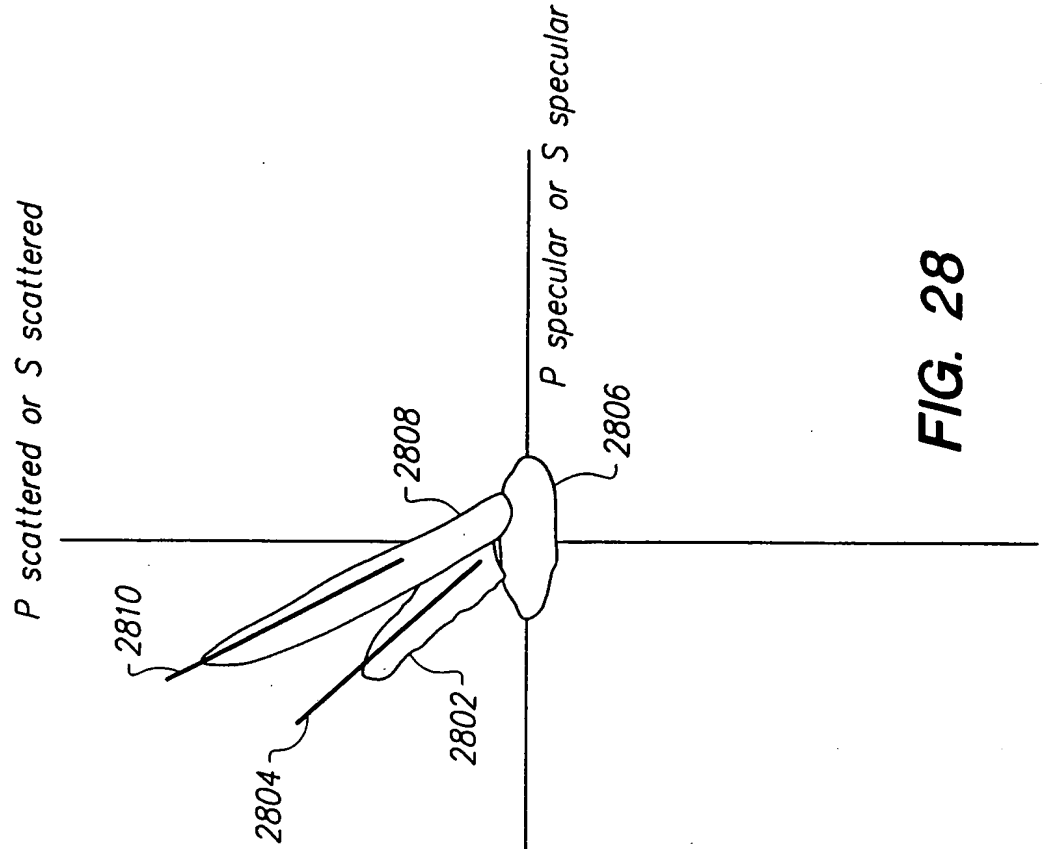


FIG. 28

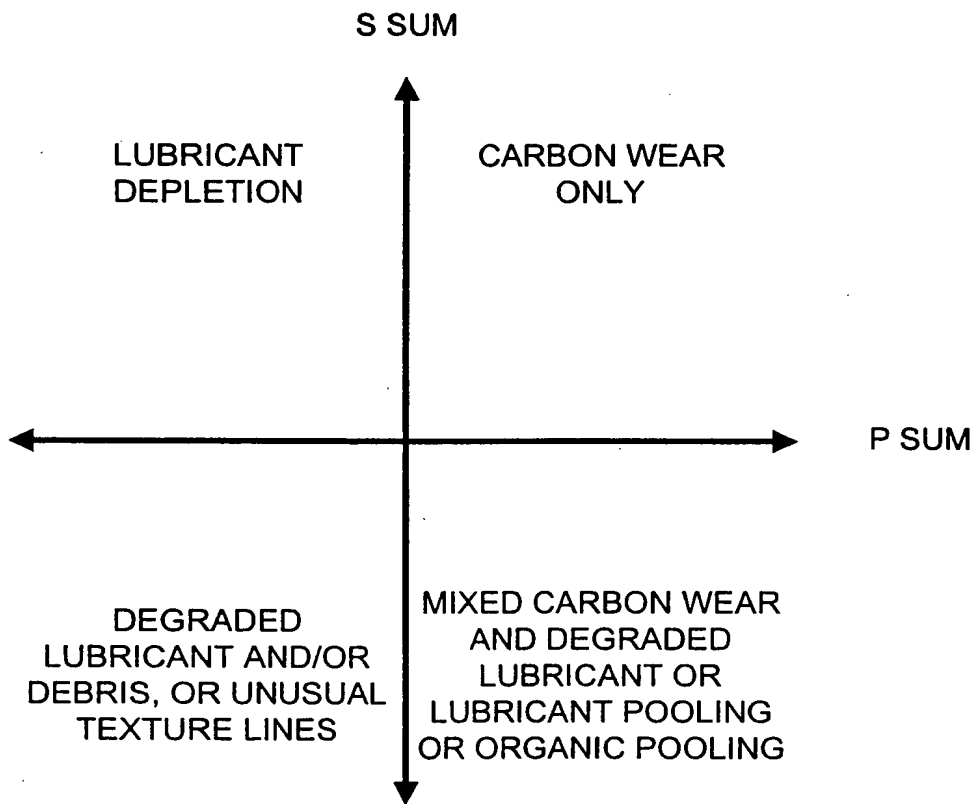


Figure 26

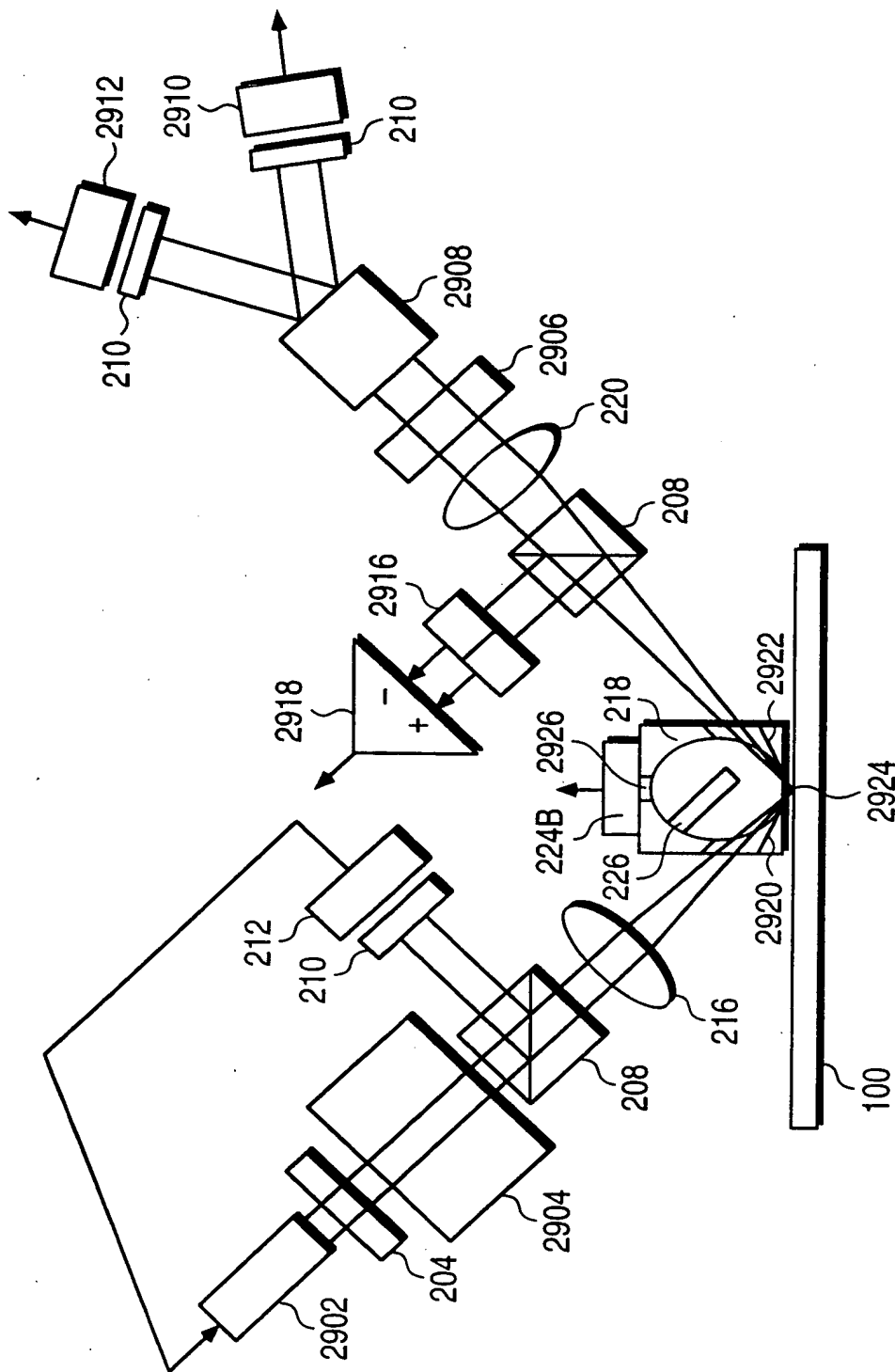


FIG. 29

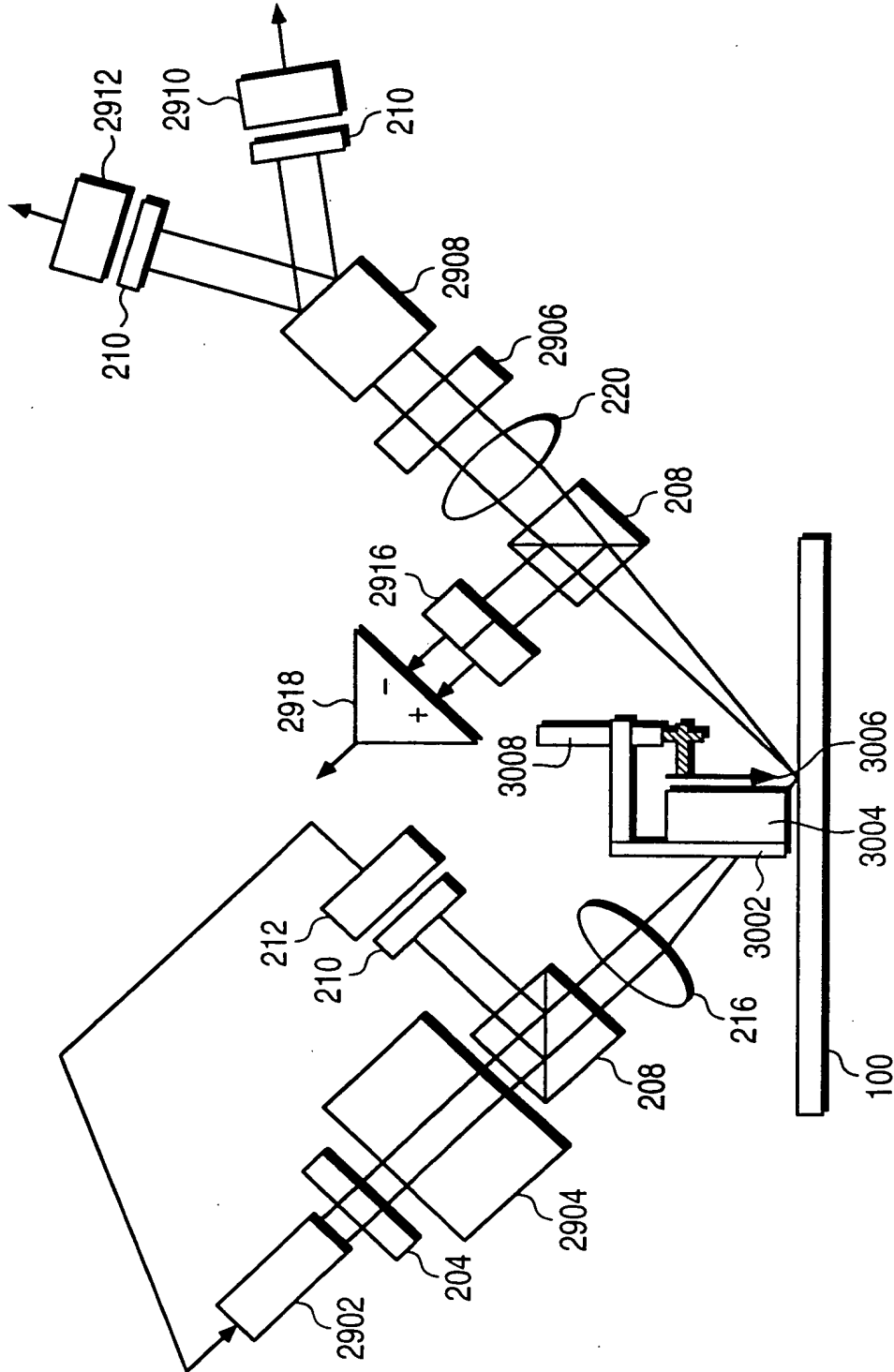


FIG. 30



Interpretation of Pq versus Sq Histogram

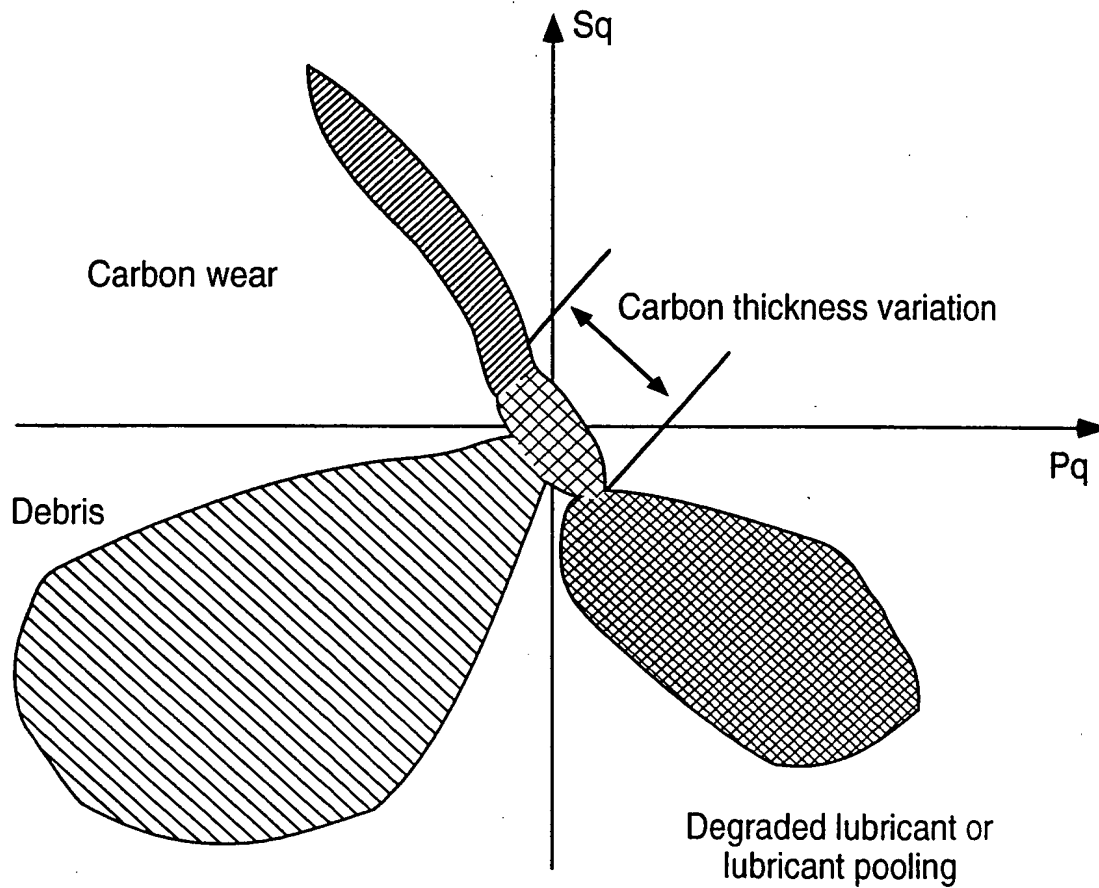


FIG. 31